6686FF.2C6C1hb0

N99P1277
US00

FIG. 1

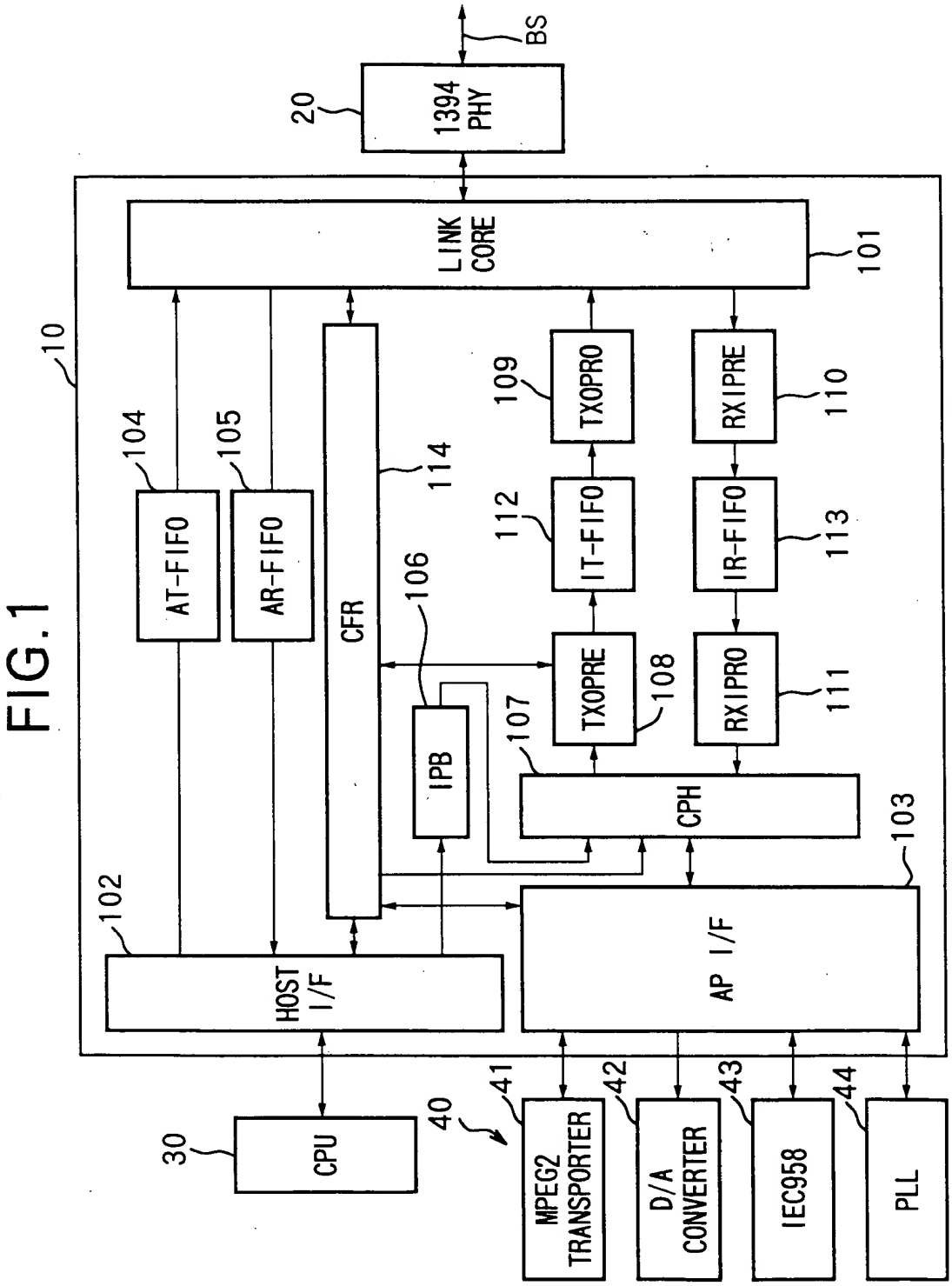


FIG.2A

sy[3 : 2]	CIPHER MODE	CONTENTS
11	MODE A	Never Copy
10	MODE B	Copy Once
01	MODE C	No More Copy
00	NO ENCIPHER	Copy Free

FIG.2B

sy[1]	KIND OF CIPHER KEY
1	Even Key
0	Odd Key

FIG.3

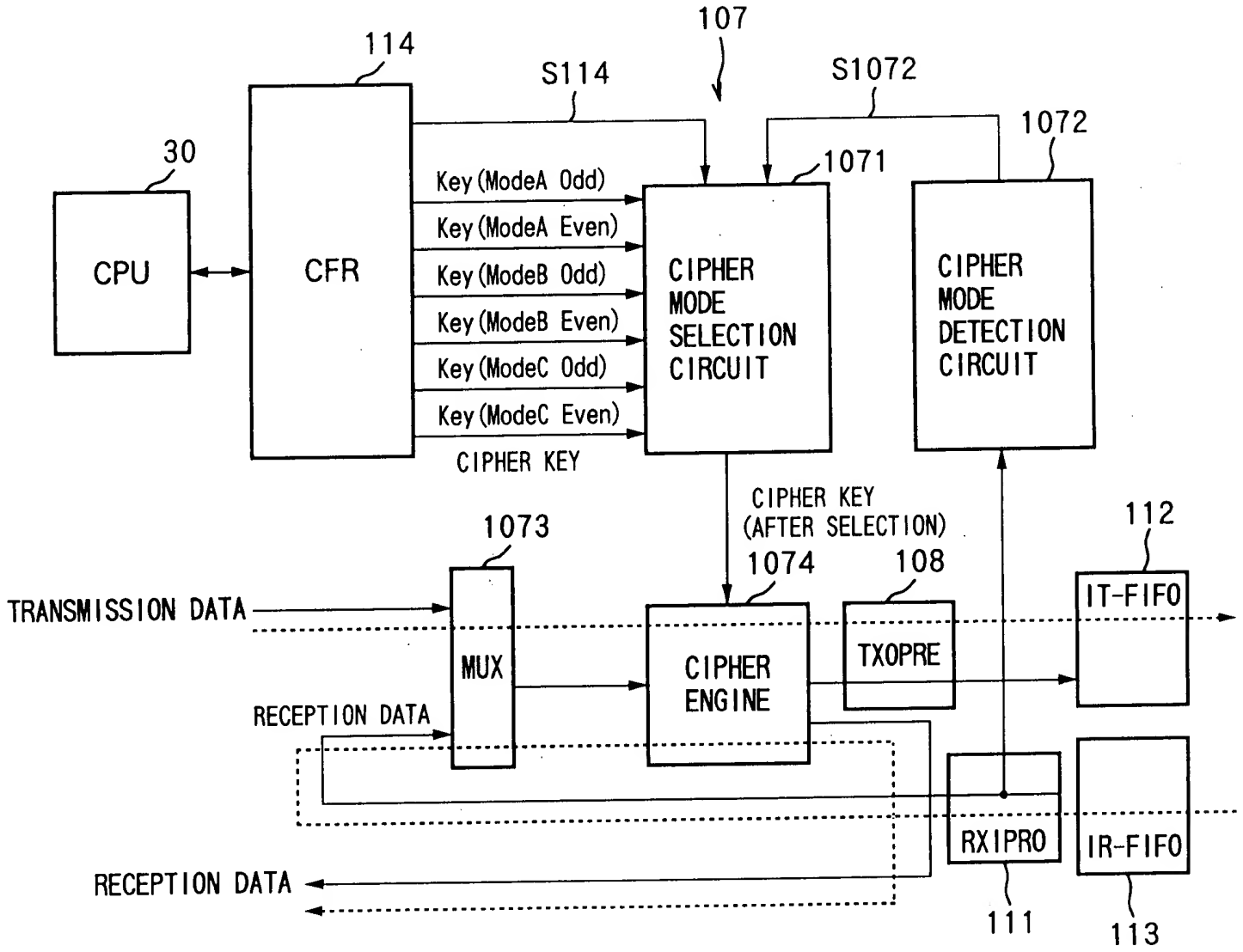

107
114
S114
S1072
1072
30
1071
CPU
CFR
Key (ModeA Odd)
Key (ModeA Even)
Key (ModeB Odd)
Key (ModeB Even)
Key (ModeC Odd)
Key (ModeC Even)
CIPHER KEY
CIPHER MODE SELECTION CIRCUIT
CIPHER MODE DETECTION CIRCUIT
CIPHER KEY (AFTER SELECTION)
1073
1074
108
112
TRANSMISSION DATA
MUX
CIPHER ENGINE
TXOPRE
IT-FIFO
RECEPTION DATA
RXIPRO
IR-FIFO
RECEPTION DATA
111
113

FIG.4A

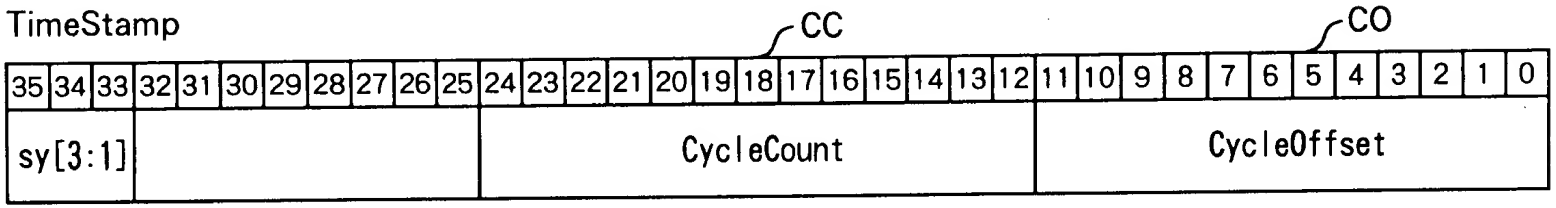

TimeStamp
CC
CO
35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
sy[3:1]
CycleCount
CycleOffset

FIG.4B

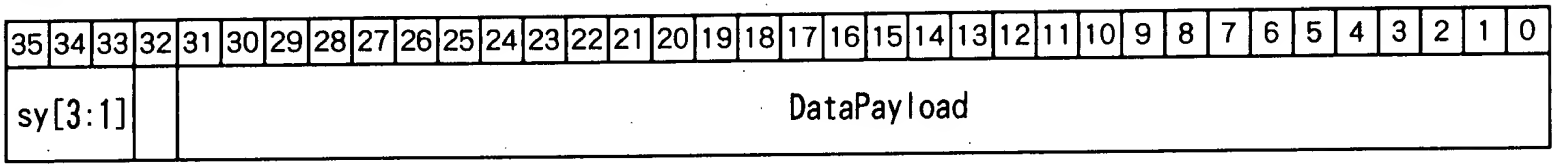
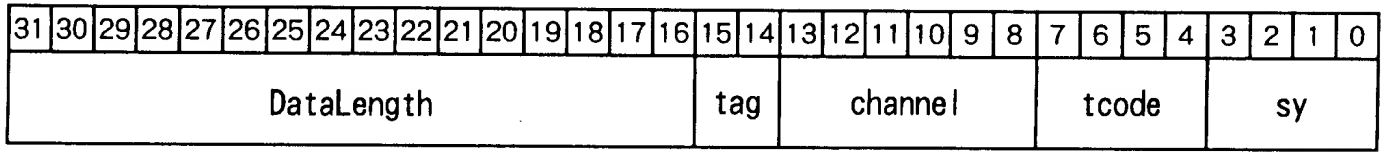
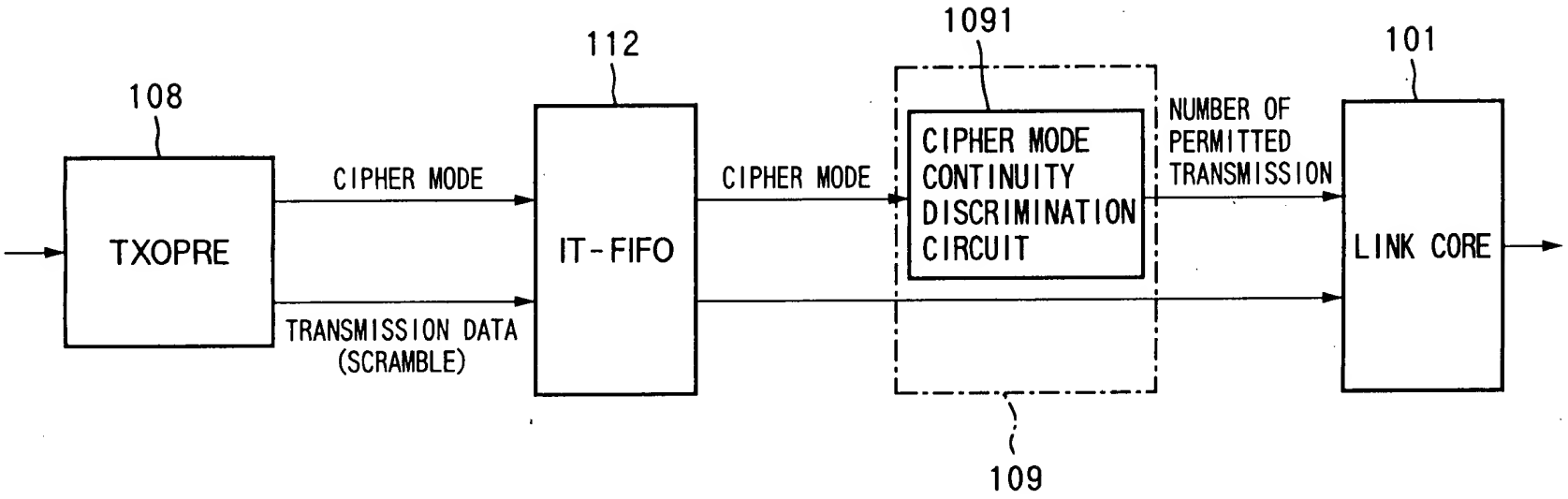

Data
35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
sy[3:1]
DataPayload

FIG.5



ASSIGN bit3-bit1 OF sy[3:0] TO CIPHER MODE

FIG.6


108
TXOPRE
CIPHER MODE
TRANSMISSION DATA
(SCRAMBLE)
112
IT-FIFO
CIPHER MODE
1091
CIPHER MODE
CONTINUITY
DISCRIMINATION
CIRCUIT
109
NUMBER OF
PERMITTED
TRANSMISSION
101
LINK CORE

TRANSMITTING 1 PACKET OF DATA WITHIN 1 CYCLE_

FIG.7A CIPHER MODE

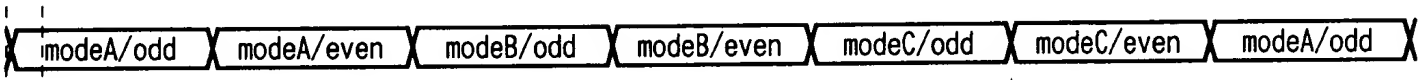


FIG.7B ENCIPHERED PACKET DATA

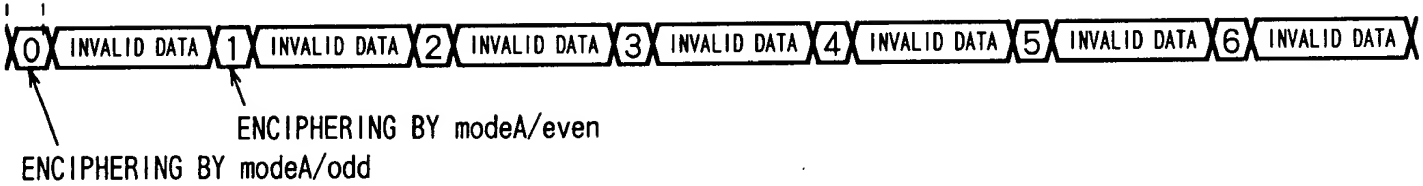


FIG.7C 1394Cycle

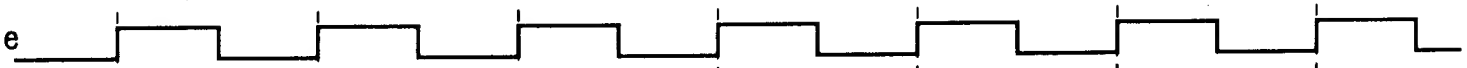


FIG.7D TRANSMISSION DATA

TRANSMITTING 1 PACKET OF DATA ENCIPHERED BY modeA/odd

FIG.8A CIPHER MODE

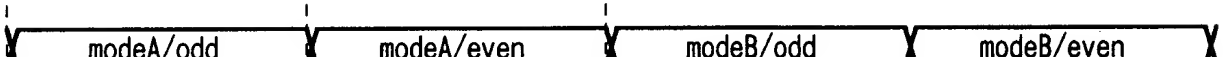


FIG.8B ENCIPHERED DATA

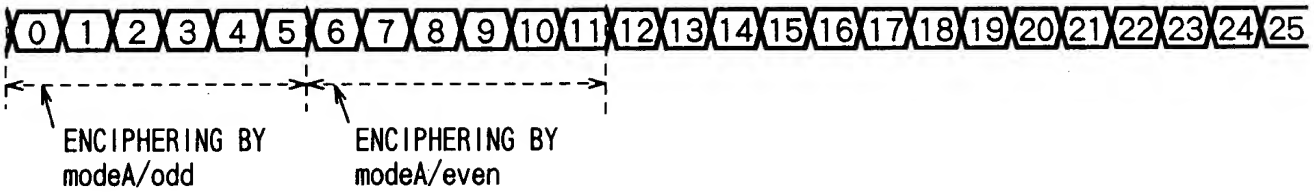


FIG.8C 1394 Cycle

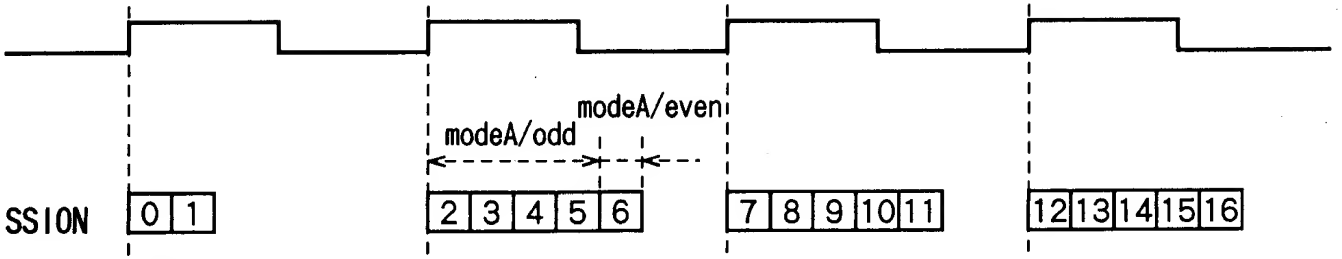


FIG.8D TRANSMISSION DATA

FIG.9A

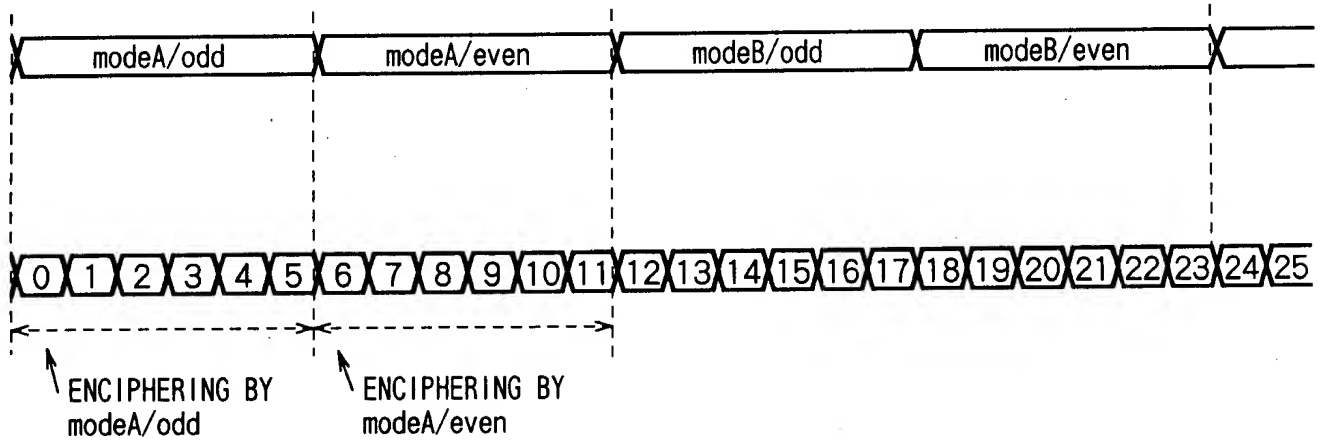


FIG.9B

FIG.9C

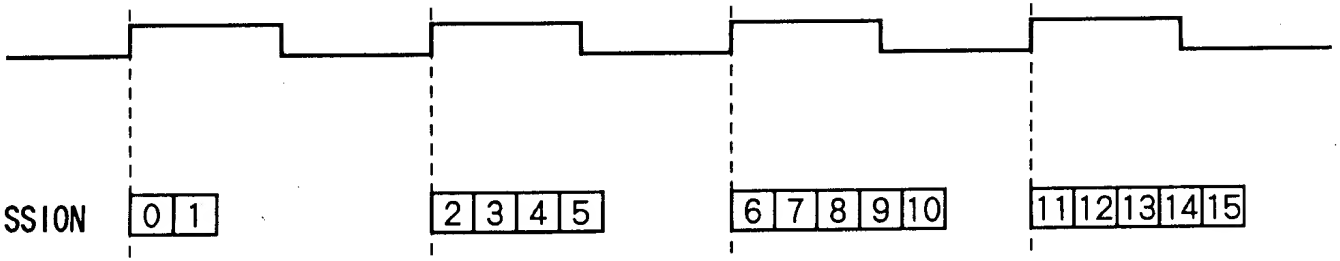


FIG.9D

FIG.10A

DVB

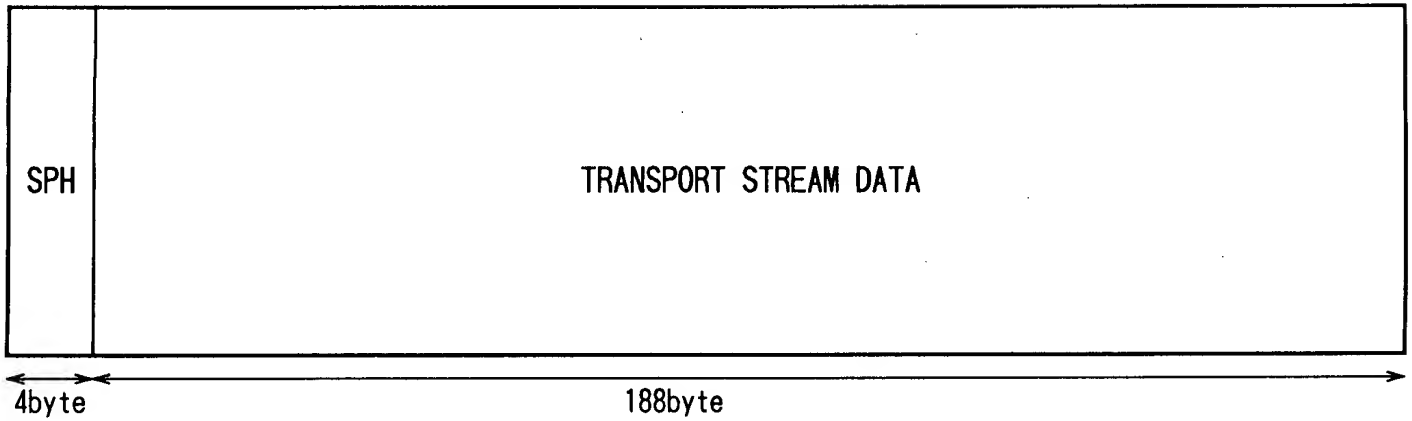


FIG.10B

DSS

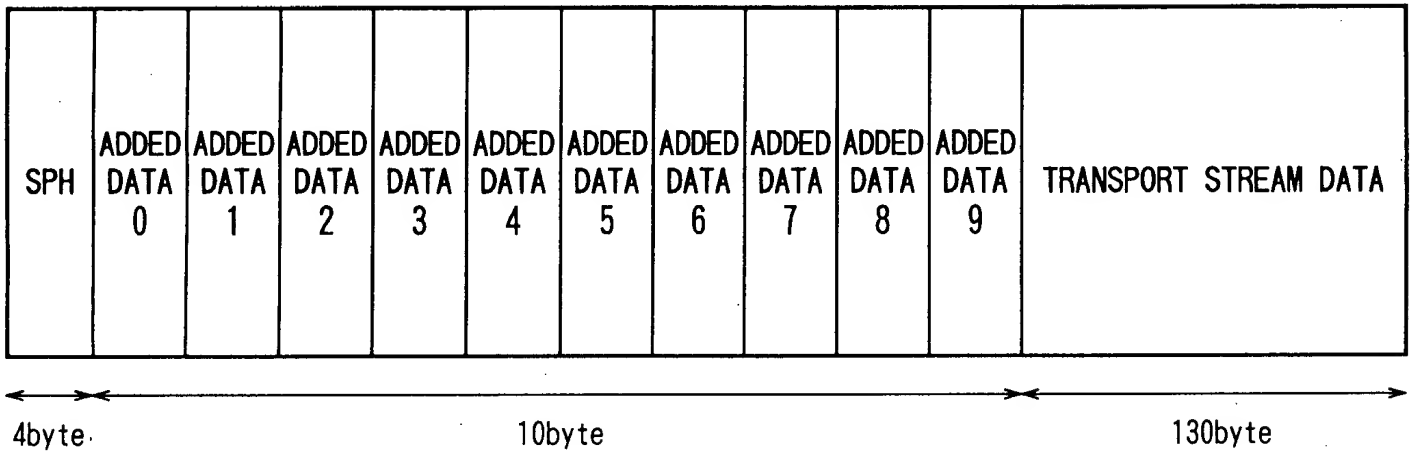
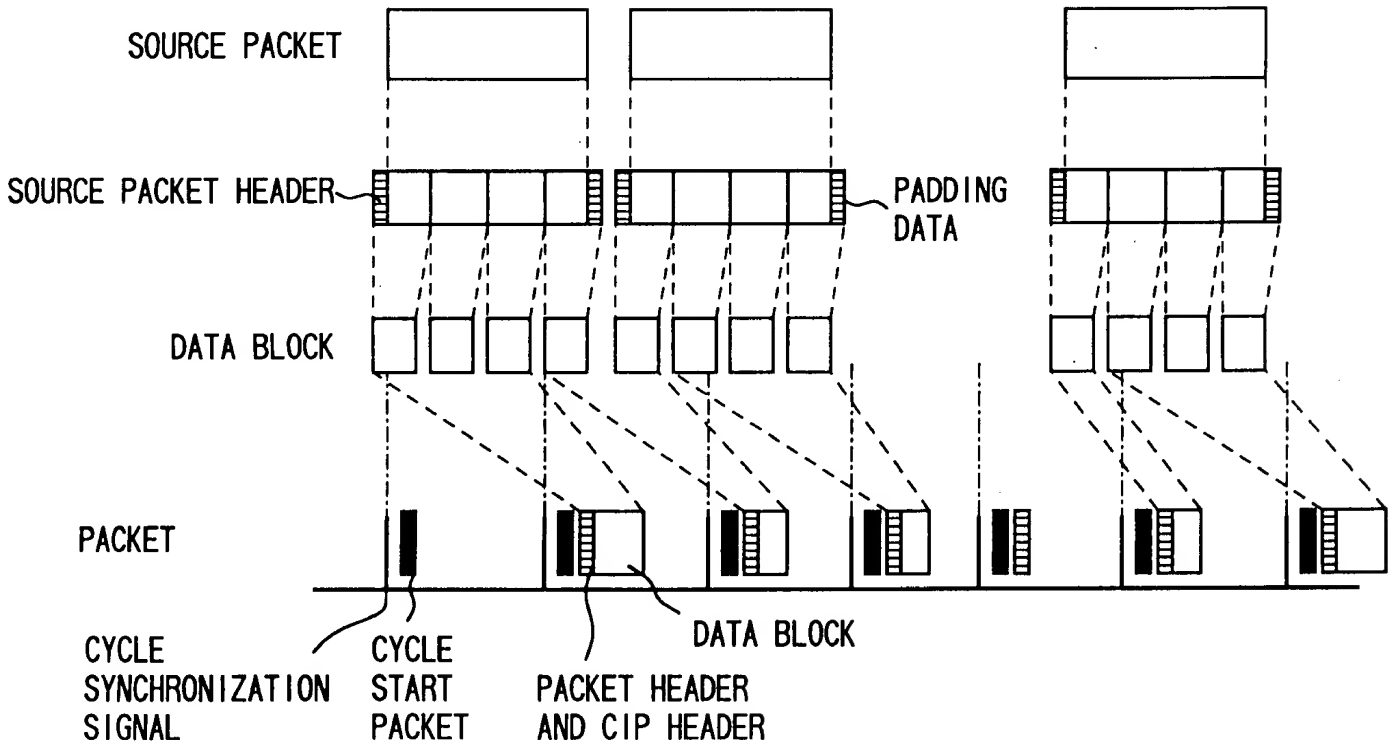
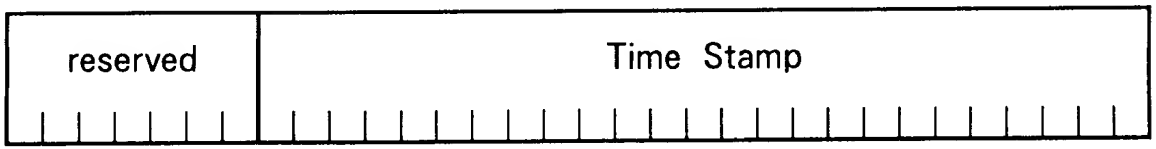


FIG.11


SOURCE PACKET
SOURCE PACKET HEADER
PADDING DATA
DATA BLOCK
PACKET
CYCLE SYNCHRONIZATION SIGNAL
CYCLE START PACKET
PACKET HEADER AND CIP HEADER
DATA BLOCK

6687FF 2226hm6G

FIG.12



SOURCE PACKET HEADER (SPH)

FIG.13

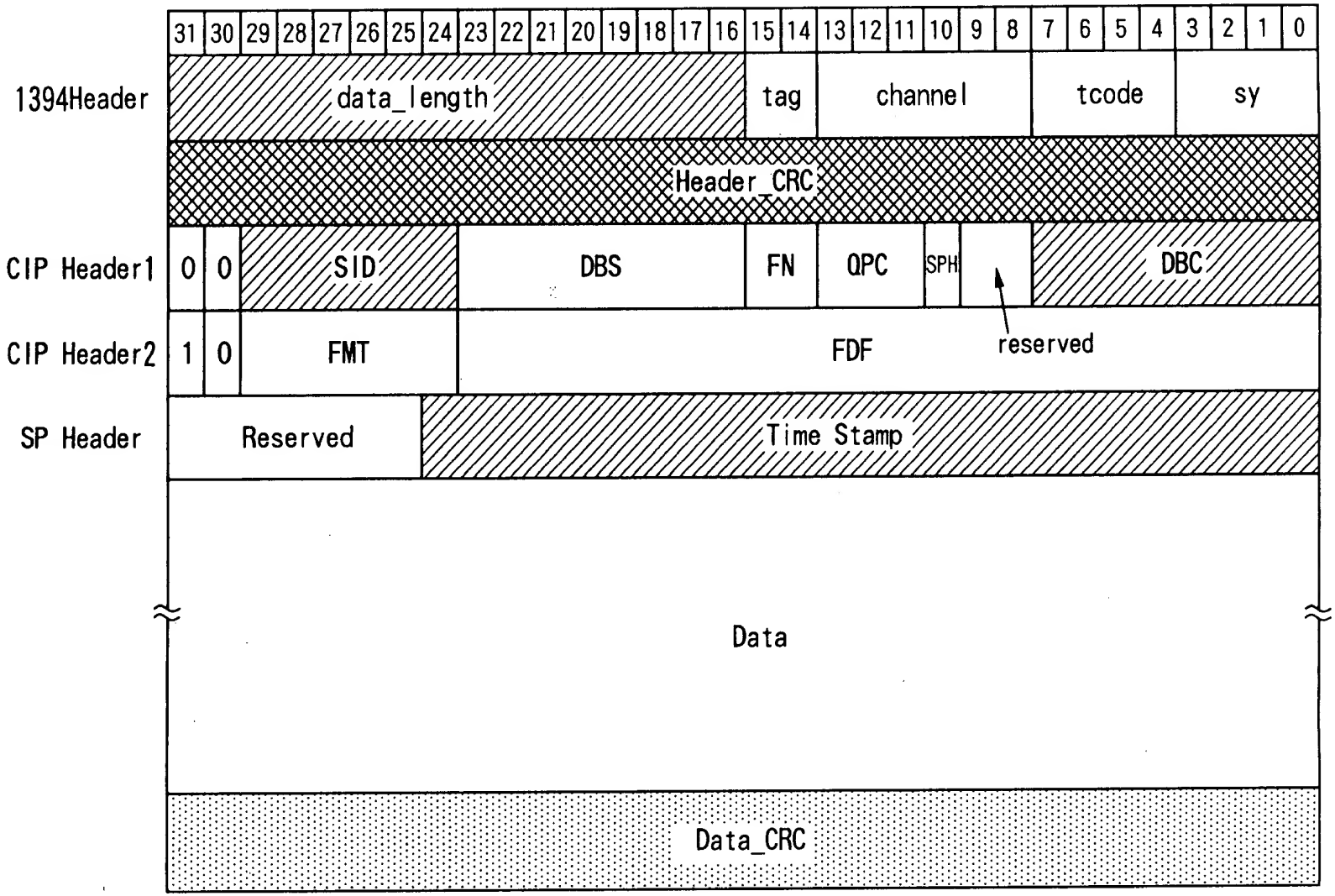
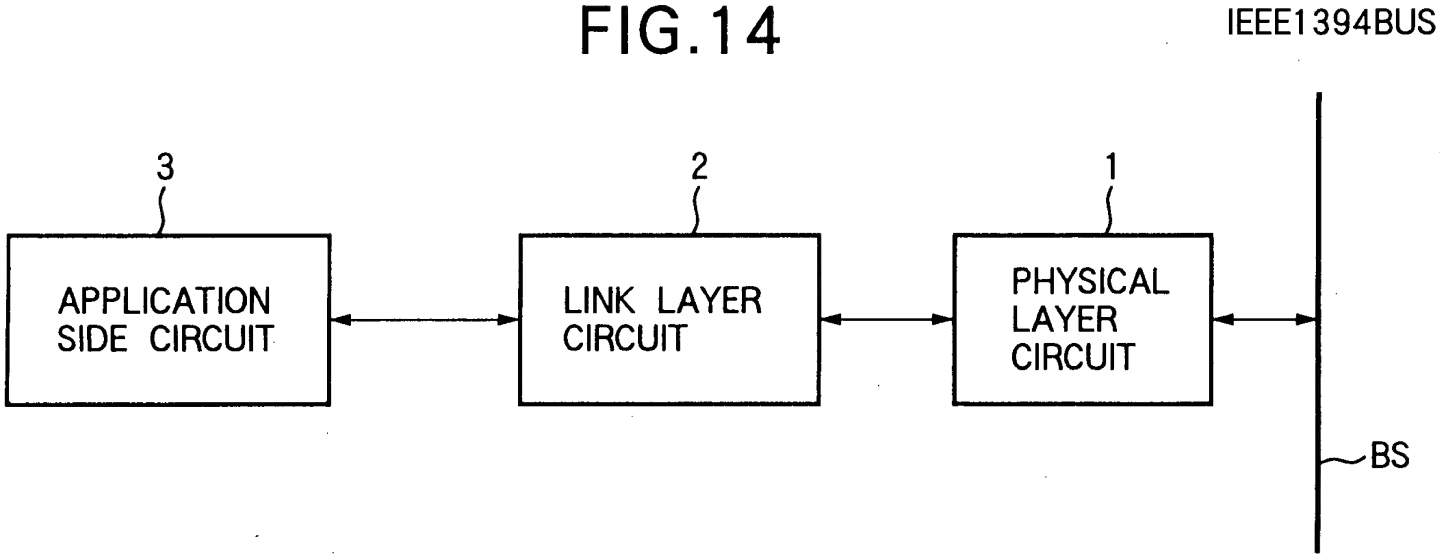

31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
1394Header
data_length
tag
channel
tcode
sy
Header_CRC
CIP Header1
0
0
SID
DBS
FN
QPC
SPH
DBC
CIP Header2
1
0
FMT
FDF
reserved
SP Header
Reserved
Time Stamp
Data
Data_CRC

FIG.14


IEEE1394BUS
3
2
1
APPLICATION SIDE CIRCUIT
LINK LAYER CIRCUIT
PHYSICAL LAYER CIRCUIT
BS